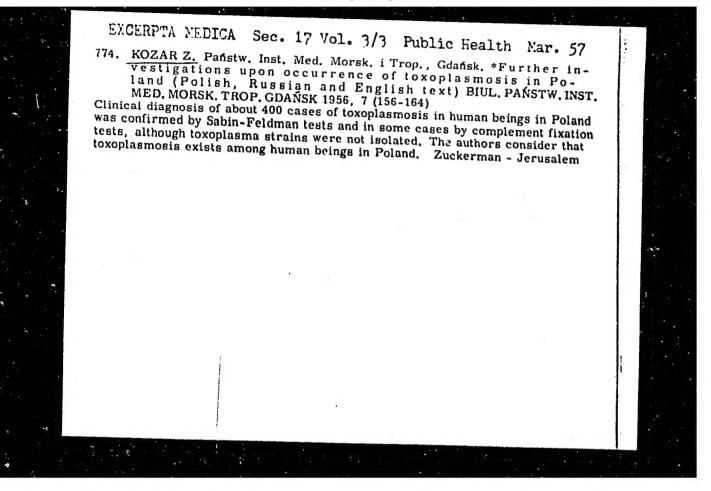
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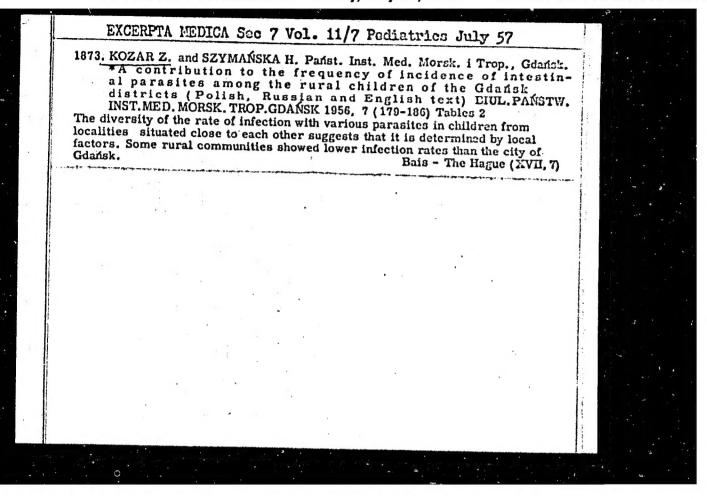
(GONADOTROPINS, PITUITARY, effects,
on exper. toxoplasmosis (Pol))

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eff. of pituitary gonadotropins (Pol))

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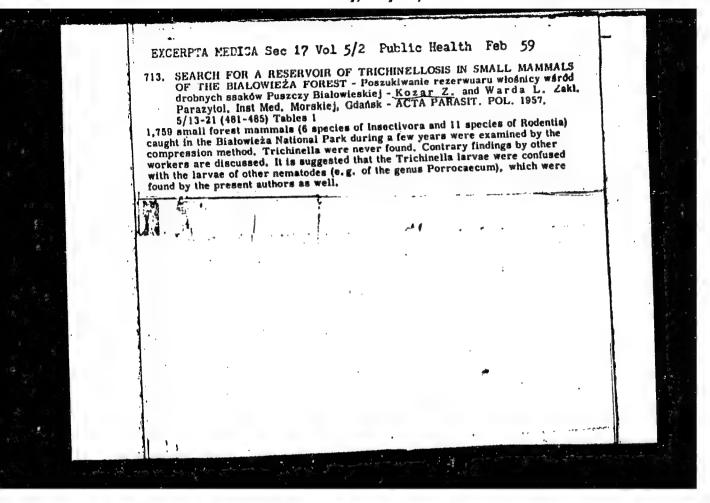
research in Feland (Pol))

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KOZAR, Zbigniew

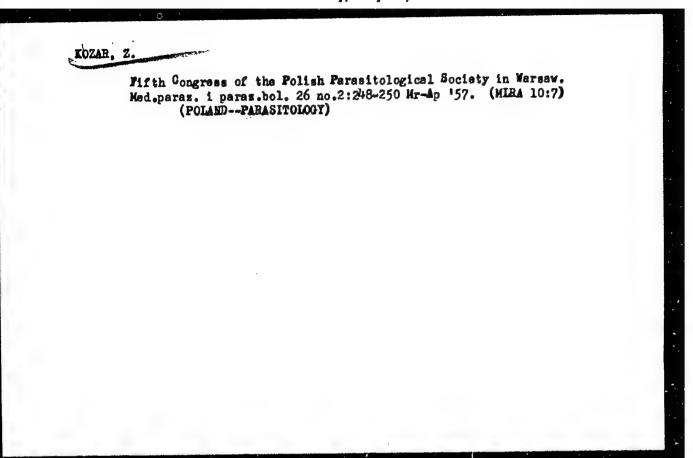
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POLAND/Zooperasitology - Parasitic Protozoa. Flagellates.

G.

Abs Jour

: Ref Zhur - Biol., No 21, 1958, 95285

Author

: Kozar, Zbigniew

Inst Title

: Problem of Toxoplasmosic at the Congress on Parasitology

in Prague.

Orig Pub

: Wiadom. parazytol., 1958, 4, No 1, 39-49

Abstract

: No abstract.

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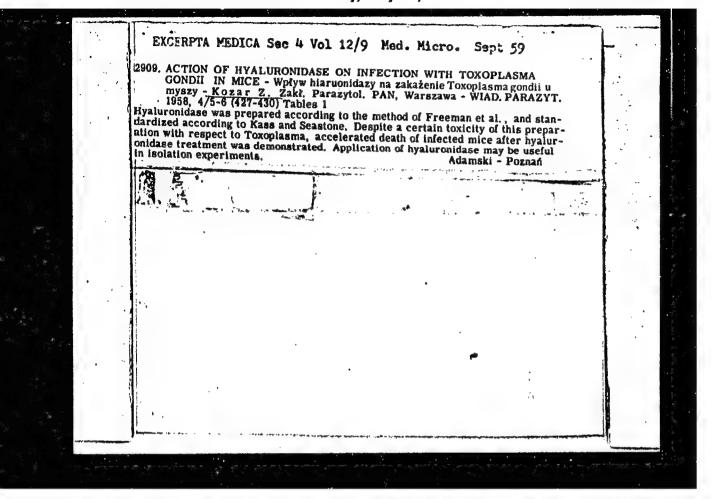
KOZAR, Zbigniow

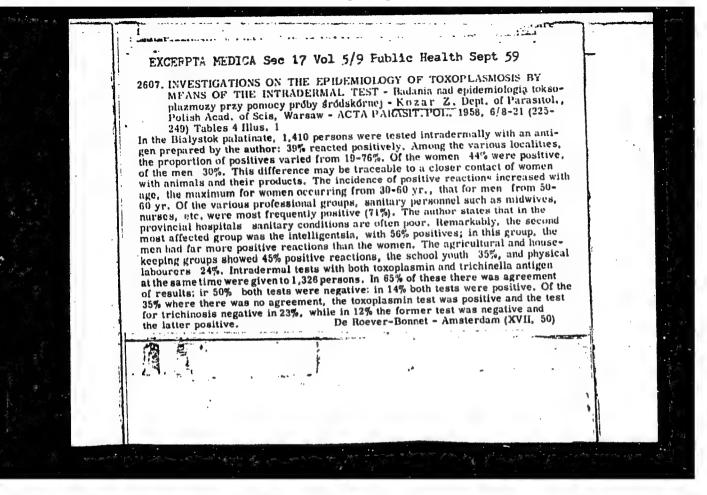
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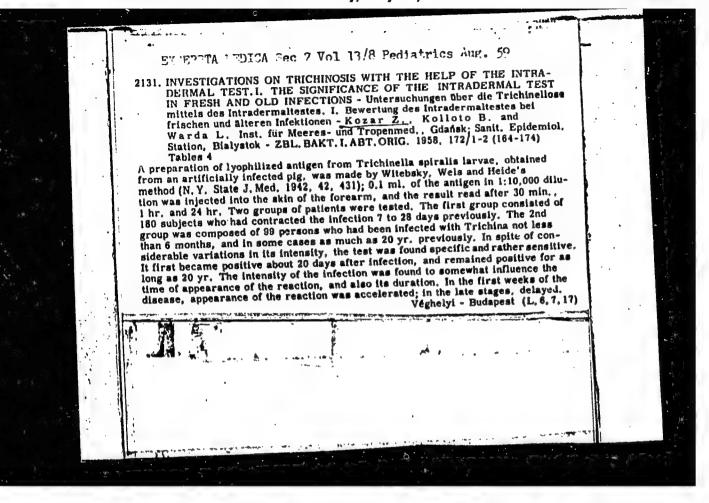
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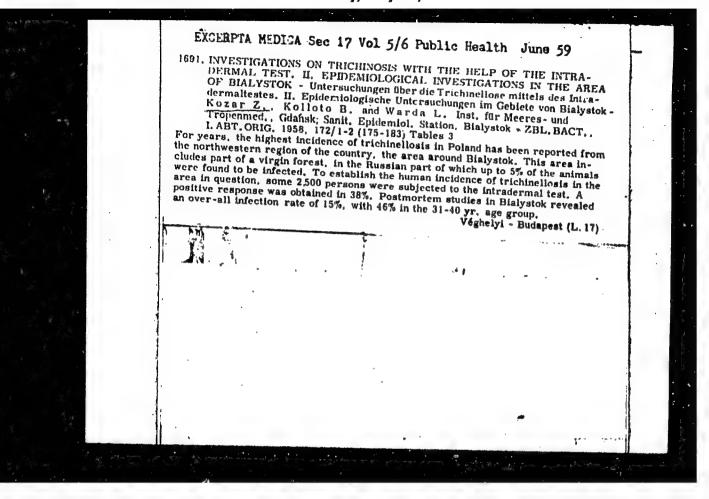
(TRICHINOSIS, prevention and control,
in Poland (Pol))

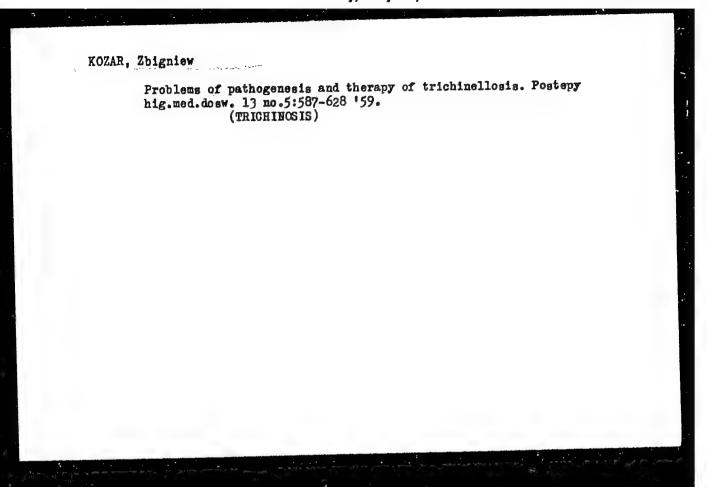
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same (Pol))

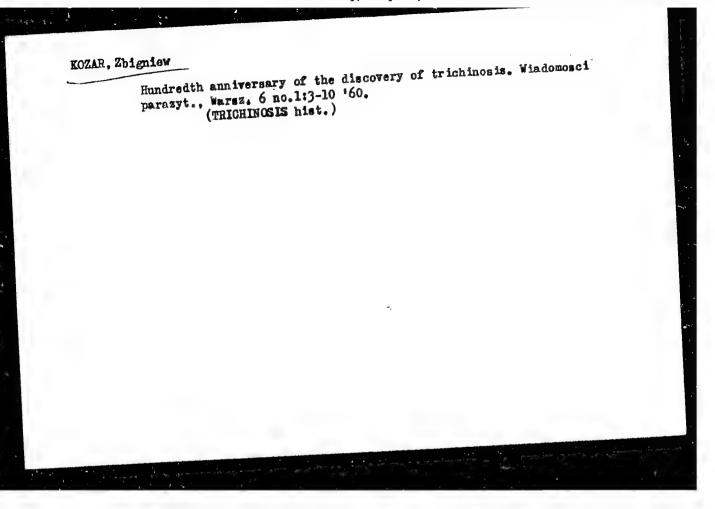


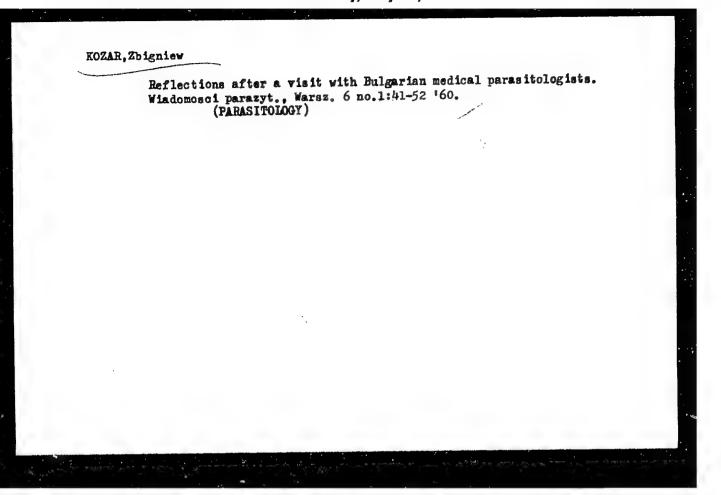












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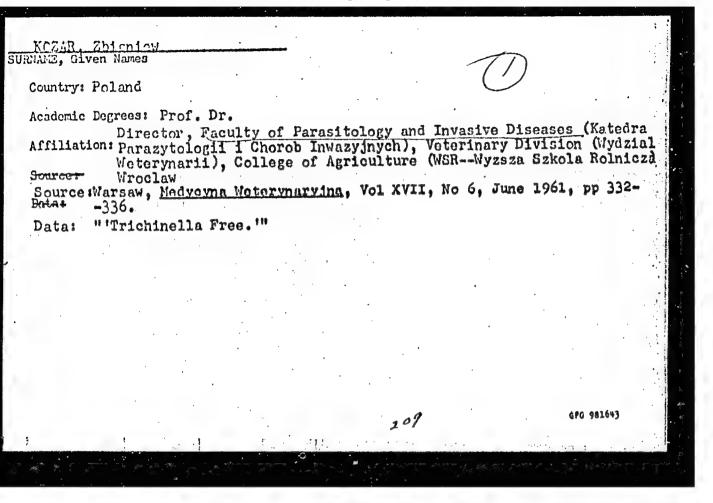
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KOZARENKO, B.I.; KARIMOVA, D.K.; KOSTYAKOVA, Ye.B.; LOZINSKIY, A.M.;
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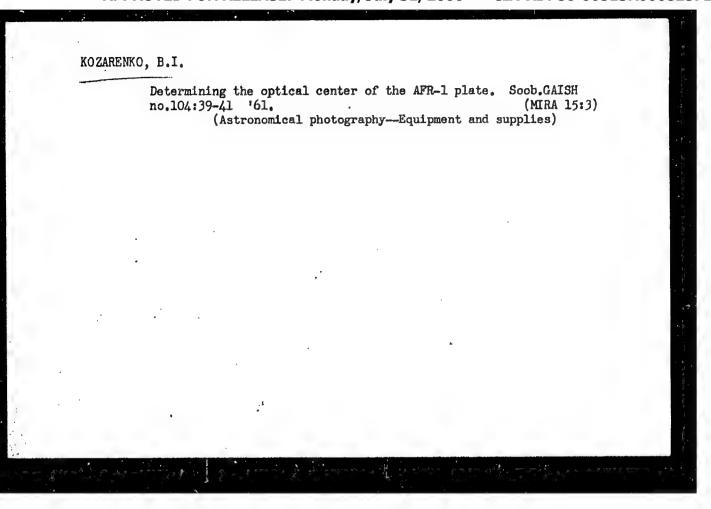
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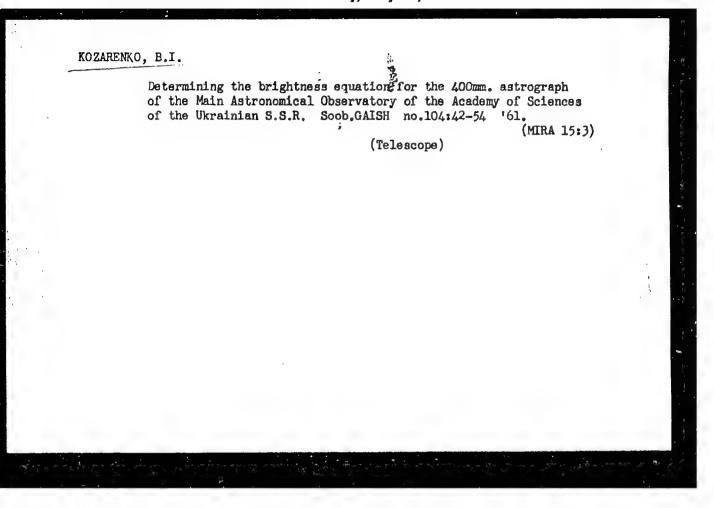
BUGOSLAVSKAYA, Ye.Ya. [deceased]; KOZARENKO, B.I.

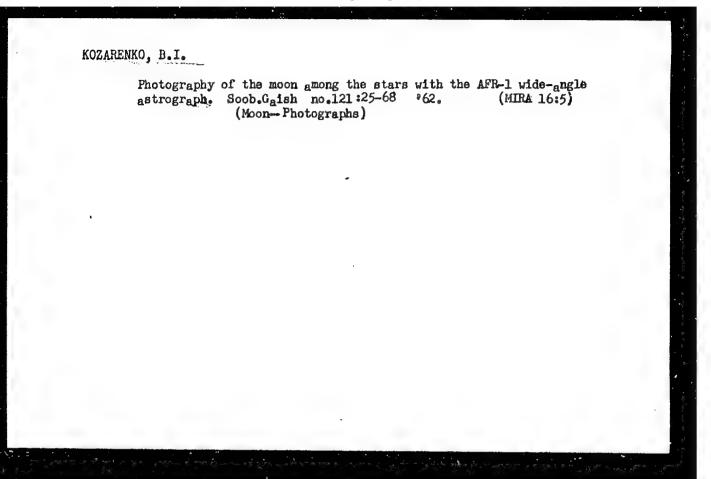
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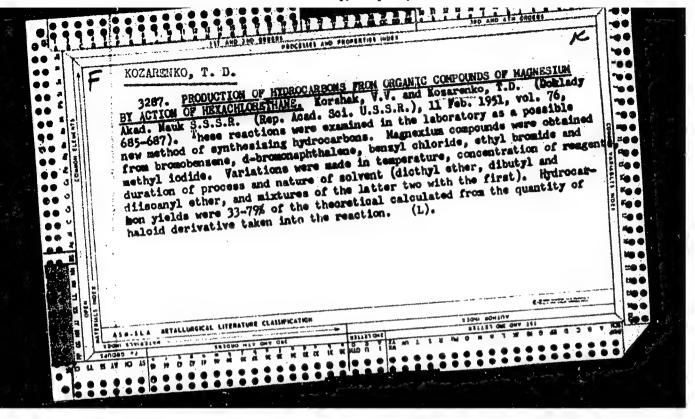
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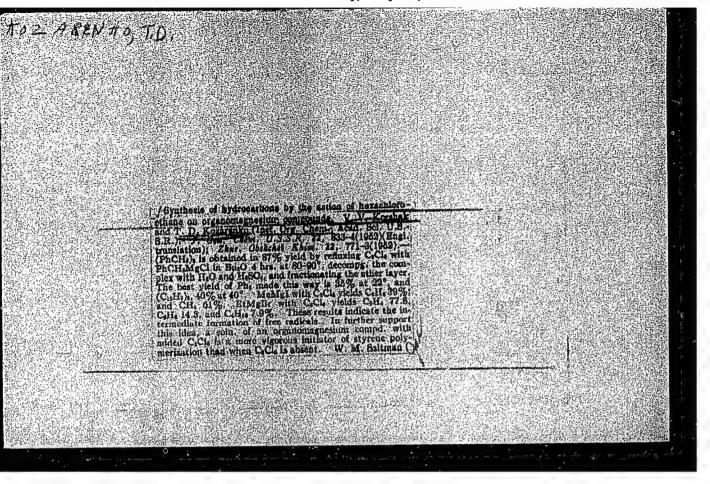
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KOZARENEO, T.D

USSR/Organic Chemistry. Natural Substances and Their E-3 Synthetic Analogues.

Abs Jour: Ref Zhur- Khimiya, No. 8, 1957, 27003.

Author : Poroshin, K.T., Kozarenko, T.D., Khurgin, Yu. I.

Inst : Academy of Sciences of USSR.

Title : Mutual Conversions of Dipeptides and Their

Anhydrides.

Orig Pub: Dokl. AN SSSR, 1956, 109, No. 2, 329 - 331.

Abstract: The stability of glycylglycine diketopiperazine (I) and alanylalanine diketopiperazine (II) in alkaline medium was studied. The hydrolysis constants for I and II, equal to pK₀ 10.8 and 12.0 correspondingly, were computed from the measurements of hydrolysis depths of I and II at various pH in alkaline medium and 40°. The

Card 1/2

APPROVED FOR RELEASE: Monday July 31, 2000 CIA-RDP86-00513R00082 200 CIA-RDP86-00513R00082 CIA-RDP86-00512 CIA-RDP86-005

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26003.

alkaline hydrolysis of I and II is a reaction of the first order with speed constants of 9.63 x 10⁻⁴ sec⁻¹ for I and 2.56 x 10⁻⁴ sec⁻¹ for II. Partial cyclization of III with formation up to about 25% of I occurs, when glycylglycine (III) is heated even under the conditions of incomplete stability of II. The order of the cyclization reaction is not below the second.

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000825720

KOZARENKO, T. D., KHURGIN, Yu t., and POROMIN, K. T.

"Mechanism and kinetics of the polycondensation of esters of amino acids," a paper presented at the 9th Congress on the Chemistry and Physics of the High Polymers, 28 Jan- 2 Feb 57, Moscow Research Inst. Organic Chemistry.

B-3,084,395

KHURGIN, Yu.I.; POROSHIN, K.T.; KOZARBNKO, T.D.

Kinetics and polycondensation mechanism of esters of Cl-amino acids. Report No.2. Kinetics of polycondensation of glycine ethyl ester. Inv.AN SSSR. Otd.khim. nauk no.2:174-178 F 157.

(HIRA 10:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Glycine) (Condensation products (Chemistry))

ozarenko, T.D.

USSR/Physical Chemistry - Kinetics, Combustion, Explosions, Topochemistry Catalisis.

B.-9

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3858

Author : T.D. Kozarenko, K.T. Poroshin, Yu. I. Khurgin.

Inst : Academy of Sciences of USSR, Section of Chemical Sciences.
Title : Kinetics and Chemican of Polycondensetics

: Kinetics and Chemism of Polycondensation of A-Aminoacid Esters. 3. Influence of Carbon Dioxide on Composition of

Polycondensation Products of Glycine Ethyl Ester.

Orig Pub: Izv. AN SSSR, Otd. Khim. n., 1957, No 5, 563-568.

Abstract: The composition of polycondensation products of glycine ethyl ester was studied at various ratios of the initial molar CO₂ concentrations and the monomer. The reaction product was analyzed after the monomer removal. The reaction product was treated with diethyl ester and was a thick mass containing a mixture of paptide ethyl esters. The obtained kinetic curves permit to establish 2, differing by speed, phases in the poly-

Card : 1/3

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000825720

USSR/Physical Chemistry - Kinetics, Combustion, Explosions, Topochemistry Catalisis.

B-9

Abs Jour: Referat. Zhurmal Khimiya, No 2, 1958, 3858

condensation process, the lst, retarded, phase depends on the initial CO₂ concentration, and the 2nd phase is subject to identical kinetic regularities independent of the CO₂ content. The qualitative investigation of the polycondensation products was carried out by the method of distributing chromatography on paper using the systems butanol - acetic acid - water, pyridine - butanol - water and phenol - water; up to C.1% of trilon B was added to the mobile phase in order to eliminate the influence of heavy metals contained in paper. It is shown that in the first stages of the process, glucilglycine ester is rapidly consumed in its conversion into diketopiperazine, as well as in the formation of diglycilglycine ester. The basic reaction is the addition of the monomer to peptide esters, but not the interaction of esters with peptides. The diketopiperazine con-

Card : 2/3

-10-

USSR/Physical Chemistry - Kinetics, Combustion, Explosions, Topo-APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R00082 200

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3858

tent was determined by the method of differential titration in various reaction stages, as well as in the sum total of various peptides. See report II in RZhKhim, 1957, 60782.

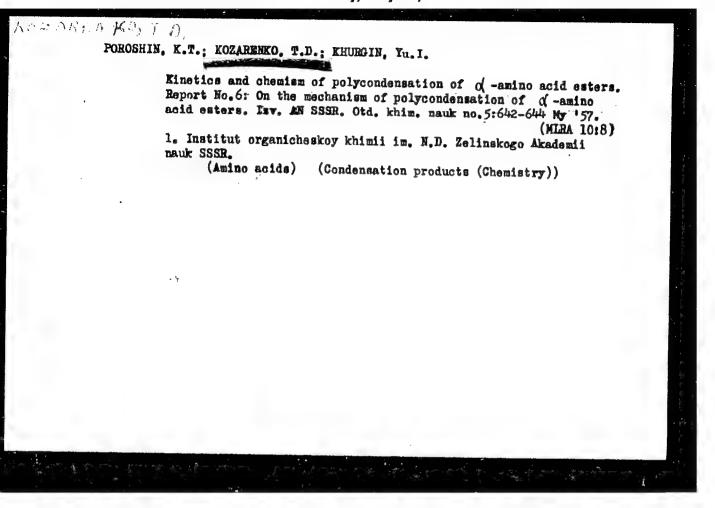
Card : 3/3

KOZARENKO, T.D.; POROSHIN, K.T.; KHURGIN, Yu.I.

Kinetics and chemism of polycondensation of %-amino acid esters.
Report No.5: Interaction of carbon dioxide with esters of glycine
and its peptides. Izv. AN SSSR. Otd. khim. nauk no.5:640-642 Ky '57.
(MIRA 10:8)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR.

(Carbon dioxide) (Glycine) (Peptides)



AUTHORS:

62-58-3-27/30

Andreyeva, N. S., Iveronova, V. I., Kozarenko, T. D., Poroshin, K. T., Shibnev, V. A., Shutskever, N. Ye.

TITLE:

Investigation of the Structure of Peptides Containing Glycine and 1-Proline (Issledovaniye struktury peptidov,

soderzhashchikh glitsin i l-prolin)

PERIODICAL:

Izvestiya Akademii Nauk SSSR,Otdeleniye Khimicheskikh

Nauk, 1958, Nr 3, pp. 376-377 (USSR)

ABSTRACT:

The investigation of peptides containing amino acids is of importance for the investigations of the structure of proteins. The stereochemical role of pyrrolidine rings within the configuration of the polypeptide chain has not yet been sufficiently explained. In general it is assumed that the bends of the polypeptide chains are formed in such points, where residues of proline and oxyproline are present. At present structural investigations of the peptides and polypeptides of numerous amino acids are carried out. There have, however, only few works been published on the investigation of compounds containing amino acids. The aim of this work is the investigation of the above mentioned

Card 1/2

Investigation of the Structure of Peptides Containing 62-58-3-27/30 Glycine and 1-Proline

> structure of peptides. Glycyl-1-prolyl, 1-prolylglycine, carbobenzoxyglycyl-1-prolyl and the anhydride of glycyl-1proline were synthetized. Furthermore the first stage of the x-ray analysis of the synthetized compounds was finished.

There are 1 table and 10 references, 1 of which is Soviet.

ASSOCIATION:

Fizicheskiy fakul tet Moskovskogo gosudarstvennogo universiteta i Institut organicheskoy khimii im.

N. D. Zelinskogo Akademii nauk SSSR

Physics Department of Moscow State University and the Institute for Organic Chemistry imeni N. D. Zelinskiy,

AS USSR)

SUBMITTED:

October 31, 1957

Card 2/2

AUTHORS:

Poroshin, K. T., Kozarenko, T. D., Shibnev, SOV/62- 58- 9- 20/26

TITLE:

The Exchange Reactions Between 1-Prolylglycine-Diketopipera-

zine and Its Dipeptides (O vzaimoprevrashchenii diketo-

piperazina 1-prolilglitsina i yego dipeptidov)

PERIODICAL:

Izvestiya Akademii nauk: SSSR. Otdeleniye khimicheskikh nauk,

1958, Nr 9, pp 1129 - 1132 (USSR)

ABSTRACT:

Glycine, 1-proline, and a-amino acids in general are especially important in relation to the question of the structure of collagen. The separation of considerable amounts of glycyl-l-proline and l-prolylglycine from hydrolysed collagen leads to the assumption that both

dipeptides are structural elements in the protein molecule.

The protein hydrolysis has been carried out under various

conditions in the past (Refs 1-3), and this makes difficult a clear explanation of the proponderance of glycyl-Pproline and 1-prolylglycine-dipeptide in the chain.

The authors of this brief communication attempted to form a cyclic anhydride of glycyl-l-proline and l-prolyl-

glycine. They further investigated the possibility of Card 1/2

The Exchange Reactions Between 1-Prolylglycine- Diketo- SOV/62-58-9-20/26 piperazine and Its Dipeptides

hydrolysing the anhydride to the dipeptide. It was found that even under moderate conditions the anhydride of 1-prolylglycine forms glycyl-1-proline in base and 1-prolylglycine in acid. The hydrolysis of the 1-prolyl-glycine anhydride does not go to completion, but attains an equilibrium condition. The formation of cyclic anhydrides of both dipeptides is simple, especially for glycine-1-proline. There are 1 figure and 7 references, 1 of which is Soviet.

ASSOCIATION:

Institut organicheskoy khimii im.N.D.Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy, AS USSR)

SUBMITTED:

March 22, 1958

Card 2/2

5(3) AUTHORS:

Poroshin, K. T., Shibnev, V. A.,

507/62-59-4-28/42

Kozarenko, T. D.

TITLE:

Synthesis of Peptides Containing L-Proline and Glycine (Sintez peptidov, sodorzhashchikh L-prolin i glitsin)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,

1959, Nr 4, pp 736-738 (USSR)

ABSTRACT:

This is a short report on the investigation of the synthesis and properties of L-prolylglycyl-L-proline, L-prolylglycyl-L-prolylglycine and of polymers which contain these groups in the molecular chain. The peptides mentioned can be synthesized by the method of the mixed anhydrides (Ref 9) and the respective polymers by the method of the polycondensation of methyl esters of these peptides. The synthesis of L-prolylglycyl-Lprolylglycine esters was carried out in two ways: 1) by gradu-

al addition of the methyl esters of amino acids (glycine, L-proline, glycine) to carbobenzoxy-L-proline (Scheme, I); 2) by addition of the methyl ester of L-prolylglycine to

carbobenzoxy-L-prolylglycine (stage A, Scheme). The synthesized peptides and their esters were identified by

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Synthesis of Peptides Containing L-Proline and

SOV/62-59-4-28/42

Glycine

means of descending chromatography (Table). There are 1 table

and 11 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii

nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy

of the Academy of Sciences, USSR)

SUBMITTED:

July 19, 1958

Card 2/2

5(3,4) AUTHORS: 507/62-59-5-31/40 Noskova, N. B., Poroshin, K. T., Kozarenko, T. D.

TITLE:

On the Accelerating Effect of the Peptide Esters on the Polycondensation Reaction of Glycine-ethyl Ester (Ob uskoryayu-shchem deystvii na reaktsiyu polikondensatsii etilovogo efira glitsina efirov peptidov)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 5, pp 935-936 (USSR)

ABSTRACT:

On the basis of the observed acceleration of the condensation reaction of glycine-ethyl ester by addition of the esters of the polymer, the autocatalytic character of this reaction has already been pointed out in previous papers (Ref 1). In the present paper the autocatalytic character of the polycondensation reaction of the esters of amino-acids is investigated, for which purpose the influence exercised by certain additions of tripeptide and polycondensate upon the rate of the polycondensation reaction of glycine-ethyl ester is subjected to a close examination. The polycondensation reaction mentioned was investigated for the purpose of determining its character, i.e. with the addition of CO₂, CO₂ + tripeptide ester, and

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SOV/62-59-5-31/40 On the Accelerating Effect of the Peptide Esters on the Polycondensation Reaction of Glycine-ethyl Ester

> further without the addition of CO2, addition of polycondensate, and addition of tripeptide ester in dependence on the time of reaction (Figs 1,2). It was found that the reaction time of polycondensation in the absence of CO2 passes considerably more slowly and is divided into two stages. A rather long first stage, in which hardly any polycondensation occurs at all, (58 hours) is followed by a second in which the kinetics of the development of polycondensation is of the first order. The presence of polycondensate shortens the first stage. The reaction kinetics of the second stage remains one of the first order owing to the additions. There are 2 figures and 8 references, 4 of which are Soviet.

ASSOCIATION:

Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED:

October 22, 1958

Card 2/2

5(3)

SOV/62-59-5-34/40

AUTHORS:

Khurgin, Yu. I., Poroshin, K. T., Kozarenko, T. D.

TITLE:

The Kinetics of the Polycondensation of Glycine-ethyl Esters in the Presence of Its Carbamate (Kinetika polikondensatsii etilovogo efira glitsina v prisutstvii yego karbamata)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 5, pp 941-943 (USSR)

. ABSTRACT:

In the course of previous investigations of the kinetics of the polycondensation of esters of the α -amino acids it has been shown that the initiating effect of carbon dioxide is connected with the formation of the symmetric carbamate:

R'OOC. CHR.NH, COC.NH. CHR. COOR! Carbamate formation is an

endothermic reaction, and therefore overheating of the reaction mass may easily occur if CO2 is added at an increased rate. The

carbamate itself causes no thermal impediment to polycondensation. In this connection, the kinetics of the consumption of monomers and the variation of the composition of the polycondensed glycine-ethyl ester obtained in the presence of a carbamate was investigated in the present case. The investi-

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sov/62-59-5-34/40

The Kinetics of the Polycondensation of Glycine-ethyl Esters in the Presence of Its Carbamate

gation methods are the same as those of reference 1. The content of free monomers, the reaction product yield, and their diketopiperazine and amino nitrogen content was determined. Figures 1 and 2 show the velocity constant of the consumption of monomers and, accordingly, the concentration of the diketopiperazines in the polycondensation products when carbamate and CO2 are

used as initiators. From the difference alone between the consumption of monomers conclusions are drawn as to a difference in the kinetics of the aggregation of the diketopiperazines. From figure 2, which shows the concentration of diketopiperazines in the final products, a distinct difference in the two initiators may be recognized, especially at the beginning of the reaction. The difference is caused by heating the reaction mass by the endothermal formation of carbamate when using the CO2-initiator.

When carbamate is used as initiator, the reaction product yield remains proportional to the time of reaction, and also the amino nitrogen (NH2-N) content in the reaction products remains constant. The authors thank Ye. V. Leonova for her assistance.

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SOV/62-59-5-34/40

The Kinetics of the Polycondensation of Glycine-ethyl Esters in the Presence of Its Carbamate

The activation energy of the affiliation of the monomer to the peptide was determined. There are 2 figures and 5 references,

4 of which are Soviet.

Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk ASSOCIATION:

SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of

the Academy of Sciences, USSR)

October 28, 1958 SUBMITTED:

Card 3/3

5(3)) AUTHORS: Shibnev, V. A., Kozarenko, T. D., Poroshin, K. T. SOV/62-59-6-31/36

TITLE:

On the Separation of L-Proline and L-Oxyproline by the Rhoder His Method (O vydelenii L-prolina i L-oksiprolina

rodanilatnym sposobom)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,

1959, Nr 6, pp 1132 - 1133 (USSR)

ABSTRACT:

By the rhodanyl method for the separation of L-proline and L-oxyproline the imino acids are always obtained with some impurities because of the great similarity of these acids. The one always contains an addition of the other. Therefore the method was changed somewhat so that by needs of it it is possible not only to separate the L-proline required but also the L-oxyproline in a chromatographically pure form from the hydrolisate of the gelatin. The yield in L-oxyprolin obtained with this method was 12% of this imino acids contained in the gelatin. The separation of the imino acids from the gelatin was made according to Bergmann. After the separation of L-proline (pure) from the mixture of L-proline and L-oxyproline, the latter (60%) is obtained with an admixture of 40% L-proline. This mixture is treated with methanol and dry either and the powder of the imino acids thus obtained

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On the Separation of L-Proline and L-Oxyproline by the Rhodanilic Method

SOV/62-59-6-31/36

from methanol water is subjected to repeated re-crystallization, which leads to L-oxyproline in purest form. The L-proline contained in the methanol filtrate is then in a similar way purified from the L-oxyproline still contained in vestige, and thus finally also purest L-proline is obtained. There are 6 references, 1 of which is Soviet.

ASSOCIATION:

Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSE (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

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SURMITTED:

December 9, 1958

Card 2/2

5(3), AUTHORS:

Kozarenko, T.D., Noskova, N.B.,

SOV /62-59-7-25/38

Poroshin, K.T.

TITLE:

On the Chlorhydrate-Method for the Determination of the Monomer in the Reaction of Polycondensation of the Esters of &-Amino Acids (O khlorgidratnom metode opredeleniya monomera v reaktsii polikondensatsii efirov &-aminokislot)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 7, pp 1324 - 1327 (USSR)

ABSTRACT:

The synthesis of polyamino acids by polycondensation develops chiefly in the first stage by successive chain formation from the monomers (Type A) and in the further stages by interreaction of the polymer molecules (Type B). The reaction-type A develops more rapidly than

(Type B). The reaction-type A develops more rapidly than the type B. The consumption of monomers for chain formation is determined in the final product from the non-reacting monomers. Separation of these monomers: is easy, but the determination in the ether extract is connected with some difficulties. A new method was elaborated by the authors precipitating the monomers as their hydrochlorides. Beside the possibility of quantitative separation of the salts from

Card 1/2

On the Chlorhydrate-Method for the Determination SOV/62-59-7-25/38 of the Monomer in the Reaction of Polycondensation of the Esters of A-Amino Acids.

the ether extract, this method offers the advantage that the salts are also not destroyed by warming to

100°; so they may be used for further polycondensation. The determination of the ethyl esters of glycine,d, l-phenylalmine l-alanine, d,l-valine and l-proline is described in the experimental part. The results are listed in tables 1-4. There are 4 tables and 12 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR

(Institute of Organic Chemistry imeni N.D. Zelinskiy of the

Academy of Sciences, USSR)

SUBMITTED: November 30, 1957

Card 2/2

5(3) AUTHORS:

Khurgin, Yu.I., Kozarenko, T.D.,
Poroshin, K.T.

SOV /62-59-7-26/38

TITLE:

The Kinetics and Chemism of the Polycondensation of the Esters of & -Amino Acids (Kinetika i khimizm polikonden-

satsii efirov & -aminokislot)

VIII. The Influence of the Initial Content of Carbamate on the Velocity of the Polycondensation of the Ethyl-Ester

of Glycine. (Scobshcheniye 3. Vliyaniye nachal'nogo soderzhaniya Karbamata na skorost'polikondensatsii

etilovogo efira glitsina)

PERIODICAL:

Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk,

1959, Nr 7 pp 1328 - 1332 (USSR)

ABSTRACT:

Introducing the well-known mechanism of polycondensation of the esters of &-amino acids under the influence of simple initiators- in this case CO₂- and the formation of initiator substrate is described briefly (Refs 1-4). It had

been shown, that the original initiator for the polycondensation is not CO, but the symmetric carbamate as the

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arising substrate. If this is true, it must be the same for

The Kinetics and the Chemism of the Polycondensation SOV/62-59-7-26/38 of the Esters of &-Amino Acids. VIII. The Influence of the Initial Content of Carbamate on the Velocity of the Polycondensation of the Ethyl-Ester of Glycine

the velocity of polycondensation, no matter whether carbamate is formed by the addition of co_2 or is added directly. Moreover, for a small amount of $i/m \sim i/m$ is the relative.

over, for a small amount of i/m - i/m is the relative, molar initial concentration of the initiator i, related to the monomer m - the consumption of the monomer must be proportional to the initial amount of carbamate. In the investigation of kinetics it had been shown that this proportionality was maintained for all initial concentrations. The consumption of monomer may be represented by the following equation:

$$m(t) = (1 - 2 f_0)e^{-k(f_0)t}$$

In this paper the above named assumption is investigated. The dependence of the velocity of monomer consumption on the initial concentration of the initial or was investigated. The content of free monomers in the reaction product was

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The Kinetics and Chemism of the Polycondensation SOV/62-59-7-26/38 of the Esters of & Amino Acids. VIII. The Influence of the Initial Content of Carbamate on the Velocity of the Polycondensation of the Ethyl-Ester of-Glycine

determined by means of the improvement method. Moreover, the consumption of monomers was investigated with immediate initiation with symmetric carbamate. The experimental data for the consumption of monomers with initial concentrations of initiator CO_2 $f_0 = 0.01$, 0.02, 0.04, 0.08 and 0.16 are demonstrated in a semi-logarithmic scale in figure 1. For all i/m monomer's consumption is first class. The extrapolation of the straight line cuts the ordinate in the point $lgm = 0 (m = 1) = m^0$. m^0 is reduced with increasing f_0 . Therefore m^0 is the exact initial concentration for the secondary stage of the reaction. In the equation obtained from the experiment:

$$m(t) = m^0 \cdot e^{-kt}$$

Card 3/5 m and k were calculated by the method of the least squares.

The Kinetics and Chemism of the Polycondensation 50V/62-59-7-26/38 of the Esters of &- Amino Acids. VIII. The Influence of the Initial Content of Carbamate on the Velocity of the Polycondensation of the Ethyl-Ester of Glycine.

and 7 references, 5 of which are Soviet.

The results are listed in Table 1. ———— was calculated as the stoichiometrical coefficient of the reciprocal effect of the monomer with CO₂ in the primary stage of reaction.

In this case of carbamate initiation m^o was found to be 0.995 i.e. it was equal to the initial amount of the monomer. This result may serve as evidence that carbamate is formed in the first stage of the reaction. The constants of velocity of monomer consumption in dependence on the initial concentrations of carbamate i/m are listed in table 2. The kinetic curve (Fig 2) is a straight line up to concentrations i/m = 0.07. Moreover the velocity of monomer consumption was proved to be independent of the length:

of the formed chain of polymers. There are 2 figures, 2 tables,

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SOV /62-59-7-26/38 The Kinetics and Chemism of the Polycondensation of the Esters of & - Amino Acids. VIII. The Influence of the Initial Content of Carbamate on the Velocity of the Polycondensation of the Ethyl-Ester of Glycine.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii

nauk SSSR

(Institute of Organic Chemistry imeni N.D. Zelinskiy of

the Academy of Sciences, USSR)

November 30 , 1957 SUBMITTED:

Card 5/5

5(3), 5(4)
AUTHORS: Poroshin, K. T., Khurgin, Yu. I., Kozarenko, T. D.

TITLE: Kinetics and Chemism of the Polycondensation of Esters of the α-Amino Acids and Peptides. Communication 9. On the Auto-

catalytic Nature of the Polycondensation of the Ethylester

of Glycine in the Presence of Carbon Dioxide

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,

1959, Nr 8, pp 1453-1457 (USSR)

ABSTRACT: In the present paper the assumption concerning the autocatalytic nature of the polycondensation reaction of the esters

of a-amino acids in the presence of CO₂ is investigated. For this purpose the yield of the polycondensation products of ethylglycine ester was measured and their composition determined. The condensation product was fractionated and the products of the solid phase determined by weighing. It consisted of ethyl esters of glycine peptides of various lengths, and diketopiperazine. Several test series with different CO₂ con-

tents in the initial products were carried out. From the yields obtained it could be seen that the polycondensation of athylglycine ester is an autocatalytic process with a

Card 1/2 gradual growth of the peptide chain. The growth of the peptide

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